

REMARKS

None of the claims have been amended or cancelled. Claims 1, 10, 15-23, 32, 34, 35, 38, 40 and 41 are pending. Claims 15-23, 32, 34 and 35 have been withdrawn from consideration. Claims 1, 10, 40 and 41 are the independent claims. No new matter is presented in this Amendment.

EXAMINER INTERVIEW:

During the Examiner interview held on May 15, 2007, the differences between the prior art of record and the present claims were discussed. In particular, it was discussed that the prior art of record fails to teach or suggest the process by which the material is formed and that such process forms a material yielding unexpected results.

DOUBLE PATENTING

Claims 1 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 11 and 15 of U.S. Patent No. 6,797,435 in view of Amatucci et al. 5,705,291.

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

Claims 1 and 10 are rejected under judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 12-17 of U.S. Patent No. 6,753,111.

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

Claims 1 and 10 are rejected under judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 12-17 of U.S. Patent No. 6,753,111.

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15, 28-30, 32-35 of copending Application No. 10/189384 (U.S. Patent Application Publication No. 2003/0054250).

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

Claims 1 and 10 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 23-28 of copending Application No. 10/072923 (U.S. Patent Application Publication No. 2003/0003352) in view of Amatucci et al. 5,705,291.

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 25-37 of copending Application No.09/897445 (U.S. Patent Application Publication No. 2002/0071990).

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 25-37 of copending Application No. 10/627725 (U.S. Patent Application Publication No. 2004/0018429).

Since claims 1 and 10 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature (see MPEP 804).

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. § 103 are resolved.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1, 10, 38 and 40-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci et al. U.S. Patent 5,705,291 in view of the Japanese publication JP 09-171813 (hereinafter referred to as "the JP'813 publication").

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of independent claim 1, it is noted that claim 1 recites a positive active material composition for a rechargeable lithium battery, comprising: a positive active material comprising at least one lithiated compound; and at least one amorphous additive compound selected from the group consisting of a thermal-absorbent element-included

hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate.

Applicants respectfully assert that neither Amatucci nor JP '813, whether taken singly or combined, teach or suggest at least these novel features of independent claim 1.

Amatucci discloses a lithium intercalation cell in which the surfaces of aggregate lithiated intercalation composition particulates, comprising the positive cell electrode have been passivated by coating or encapsulation in a layer of a composition comprising a borate, lithiated borate, aluminate, lithiated aluminate, silicate, or lithiated silicate. The surfaces of these particulates are coated with a layer of a composition comprising boron oxide, boric acid, lithium hydroxide, aluminum oxide, lithium aluminate, lithium metaborate, silicon dioxide, lithium silicate, or mixtures thereof (column 2, lines 5-24).

Accordingly, although Amatucci discloses an element-included hydroxide, it is noted that the element-included hydroxide taught by Amatucci is used to coat the positive active material. Therefore, the hydroxide disclosed by Amatucci is not used as an additive for the composition, as recited in the independent claim.

Furthermore, because the thermal-absorbent elements, such as the thermal absorbent element-included hydroxide, recited in independent claim 1, are used as additives for the positive active material composition, they are physically mixed with the positive active material. On the other hand, as noted above, since Amatucci simply discloses coating the material with a hydroxide, the hydroxide is not physically mixed with the positive active material. Accordingly, Amatucci also fails to teach at least this novel feature of the independent claim.

Furthermore, it is noted that Amatucci teaches that after the active material is coated with hydroxide, annealing is performed at a temperature in excess of about 400°C, thus making it evident that the hydroxide taught by Amatucci is not physically mixed with the positive active material, as recited in independent claim 1.

Similarly, the JP '813 publication discloses a nonaqueous electrolyte secondary battery having its positive electrode active material or negative electrode active material covered with an inorganic ion conductive membrane.

Accordingly, the JP '813 publication also discloses a hydroxide used to coat the positive active material. Therefore, the hydroxide disclosed by JP '813 is not used as an additive for the composition, but rather as a coating material. Accordingly, the hydroxide is not physically mixed

with the positive active material, as in the present invention.

Therefore, neither Amatucci nor the JP '813 application, whether taken singly or combined, teach or suggest the features recited in independent claim 1.

Regarding the rejections of independent claims 10, 40 and 41, it is noted that these claims recite substantially similar subject matter as claim 1. Thus, the rejections of these claims are also traversed for the reasons set forth above.

Accordingly, Applicants respectfully assert that the rejection of claims 10, 40 and 41 under 35 U.S.C. §103(a) should be withdrawn because neither Amatucci nor the JP '813 publication, whether taken singly or combined teach or suggest each feature of independent claims 10, 40 and 41.

Claims 1, 10, 38 and 40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci et al. U.S. Patent 5,705,291 in view of Yano et al. U.S. Patent 5,827,494.

Applicants respectfully traverse this rejection for at least the following reasons.

As noted above, Amatucci fails to teach or suggest the novel features recited in independent claims 1, 10 and 40.

Yano discloses an electrode active material of batteries using an active material powder which comprises composite particles comprising Ni-hydroxide or solid solutions particles consisting essentially of Ni-hydroxide the surface of which is covered with a mixture of Co-hydroxide and the hydroxide of at least one metal selected from the group consisting of Al, MG (abstract). That is, Yano discloses a hydroxide used as the positive active material itself.

Contrary to Yano, the independent claims recite a positive active material and at least one amorphous additive compound selected from the group consisting of a thermal-absorbent element-included hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate.

Accordingly, it is respectfully asserted that Yano also fails to teach a positive active material and an additive as recited above, and therefore, neither Amatucci nor Yano teach or suggest the features recited in independent claims 1, 10 and 40.

Accordingly, Applicants respectfully assert that the rejection of independent claims 1, 10

and 40 under 35 U.S.C. §103(a) should be withdrawn.

Regarding the rejection of claim 38, it is respectfully asserted that the rejection of dependent claim 38 under 35 U.S.C. § 103(a) should be withdrawn at least because of its dependency from claim 1 and the reasons set forth above, and because the dependent claim includes additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claim 38 also distinguishes over the prior art.

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci in view of Korean Publication KR 1997-56445 (hereinafter the KR '445 publication).

Applicants respectfully traverse this rejection for at least the following reasons.

As noted above, Amatucci fails to teach or suggest the novel features recited in independent claim 1.

The KR '445 publication discloses a Co-based hydroxide complex material added to an electrochemically active material to increase the capacity of a cell containing the same (abstract).

The KR '445 publication fails to cure the deficiencies of Amatucci and therefore, fails to teach or suggest the novel features of independent claim 1.

Therefore, neither Amatucci nor the KR '445 publication teach or suggest the features recited in independent claim 1.

Accordingly, Applicants respectfully assert that the rejection of independent claim 1 under 35 U.S.C. §103(a) should be withdrawn because neither Amatucci nor the KR '445 publication, whether taken singly or combined teach or suggest each feature of independent claim 1.

RESPONSE TO ARGUMENTS:

With respect to the Examiner's statement indicating that the applicant is comparing this additive with "the commercially available" additive, but not to the additive disclosed in the prior art, and thus is insufficient to overcome the prior art, Applicants traverse such characterization for at least the following reason. Applicants respectfully assert that such would be the case if the features disclosed in the prior art were the same as the features disclosed in the claims.

application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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